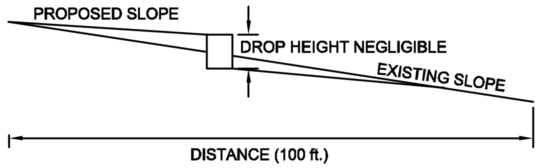
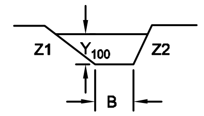


PROFILE CHANNEL DROP

NTS



CROSS SECTION

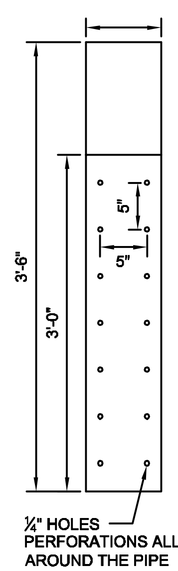
NTS

CHANNEL PF-1 STRETCH 5			
Existing Channel Condition (Input)			
Design Discharge	Q_D=	20.8 cfs	
Design Discharge Return Period	$Year_D$=	25 years	
Existing Ground Slope Along Channel Centerline	So =	0.0266 ft/ft	
100-Year Discharge	Q_{100}=	29.1 cfs	
Left Side Slope	Z1 =	4.0 ft/ft	
Right Side Slope	Z2 =	4.0 ft/ft	
Channel Manning's N (New Condition .030 typ.)	N_{new}=	0.035	
Channel Manning's N (Mature Condition .040 typ.)	N_{mature}=	0.035	
Check one of the following soil types			
	Sandy Soil	X check, OR	
	Non-Sandy Soil	check	
Proposed Channel Condition (Calculated)		New Channel	Mature Channel
Bottom Width	B=	4.0 ft	4.0 ft
100-Year Flow Depth (5' maximum)	Y_{100}=	1.22 ft	1.22 ft
100-Year Flow Velocity	V_{100}=	4.9 fps	4.9 fps
100-Year Top Width	T=	9.8 ft	9.8 ft
100-Year Flow Area	A=	6.0 sq ft	6.0 sq ft
100-Year Froude Number	Fr =	1.10	1.10
100-Year Wetted Perimeter	P=	10.1 ft	10.1 ft
100-Year Hydarulic Radius	R=	0.6 ft	0.6 ft
Design Discharge Flow Depth	Y_D=	1.08 ft	1.08 ft
Design Discharge Flow Velocity	V_D=	4.5 fps	4.5 fps
Design Discharge Top Width	T=	8.6 ft	8.6 ft
Design Discharge Flow Area	A=	4.6 sq ft	4.6 sq ft
Design Discharge Froude Number	Fr =	1.08	1.08
Design Discharge Wetted Perimeter	P=	8.9 ft	8.9 ft
Design Discharge Hydarulic Radius	R=	0.5 ft	0.5 ft
Drop Height			
Proposed New Channel Slope	Sd=	0.0266 ft/ft	0.0266 ft/ft
Drop Height per 100 ft	D =	0.0 ft/100 ft	0.0 ft/100 ft

CHANNEL PF-2 STRETCH 6			
Existing Channel Condition (Input)			
Design Discharge	Q_D=	20.0 cfs	
Design Discharge Return Period	$Year_D$=	2 years	
Existing Ground Slope Along Channel Centerline	So =	0.0120 ft/ft	
100-Year Discharge	Q_{100}=	98.8 cfs	
Left Side Slope	Z1 =	4.0 ft/ft	
Right Side Slope	Z2 =	4.0 ft/ft	
Channel Manning's N (New Condition .030 typ.)	N_{new}=	0.030	
Channel Manning's N (Mature Condition .040 typ.)	N_{mature}=	0.040	
Check one of the following soil types			
	Sandy Soil	X check, OR	
	Non-Sandy Soil	check	
Proposed Channel Condition (Calculated)		New Channel	Mature Channel
Bottom Width	B=	4.0 ft	4.0 ft
100-Year Flow Depth (5' maximum)	Y_{100}=	2.22 ft	2.48 ft
100-Year Flow Velocity	V_{100}=	5.0 fps	4.0 fps
100-Year Top Width	T=	17.8 ft	19.8 ft
100-Year Flow Area	A=	19.8 sq ft	24.5 sq ft
100-Year Froude Number	Fr =	0.84	0.64
100-Year Wetted Perimeter	P=	18.3 ft	20.4 ft
100-Year Hydarulic Radius	R=	1.1 ft	1.2 ft
Design Discharge Flow Depth	Y_D=	1.22 ft	1.36 ft
Design Discharge Flow Velocity	V_D=	3.4 fps	2.7 fps
Design Discharge Top Width	T=	9.8 ft	10.9 ft
Design Discharge Flow Area	A=	6.0 sq ft	7.4 sq ft
Design Discharge Froude Number	Fr =	0.76	0.58
Design Discharge Wetted Perimeter	P=	10.1 ft	11.2 ft
Design Discharge Hydarulic Radius	R=	0.6 ft	0.7 ft
Drop Height			
Proposed New Channel Slope	Sd=	0.0092 ft/ft	0.0092 ft/ft
Drop Height per 100 ft	D =	0.3 (negligible) ft/100 ft	0.3 ft/100 ft

NOTE: ACTUAL DEPTH OF CONSTRUCTED CHANNELS WILL BE 2.5' TO ALLOW FOR FREEBOARD.

*NOTE: DATA DEVELOPED AND PRESENTED IN THIS TABLE IS BASED ON THE PROPOSED CHANNEL DESIGN. NO SURVEY DATA WAS AVAILABLE.

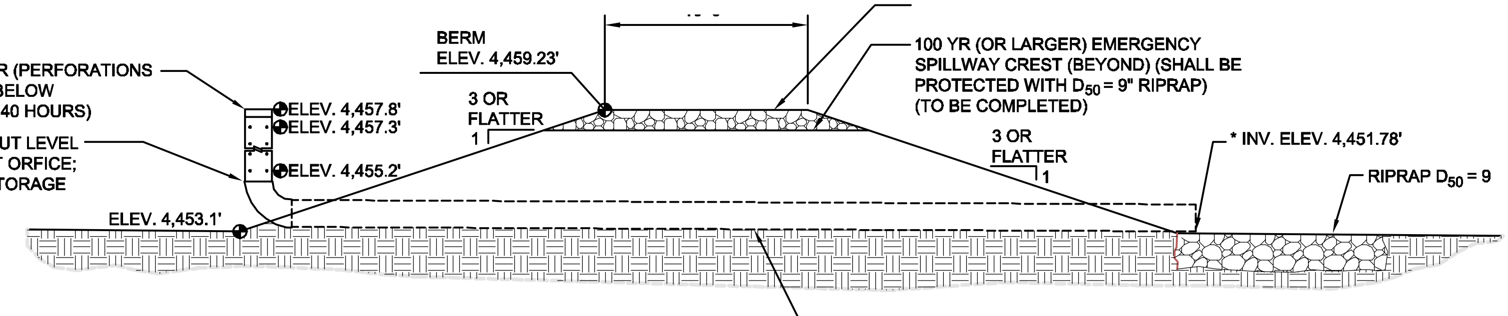


PERFORATION DETAILS FOR STAND PIPE

NTS

Channel	Q100 (cfs/ft)	Hd (feet)	Drop number	Ld (feet)	Yp (feet)	Y1 (feet)	Y2 (feet)	L (feet)
PF-2	14.05	389	0.00	21.79	11.32	0.23	8.41	72.25

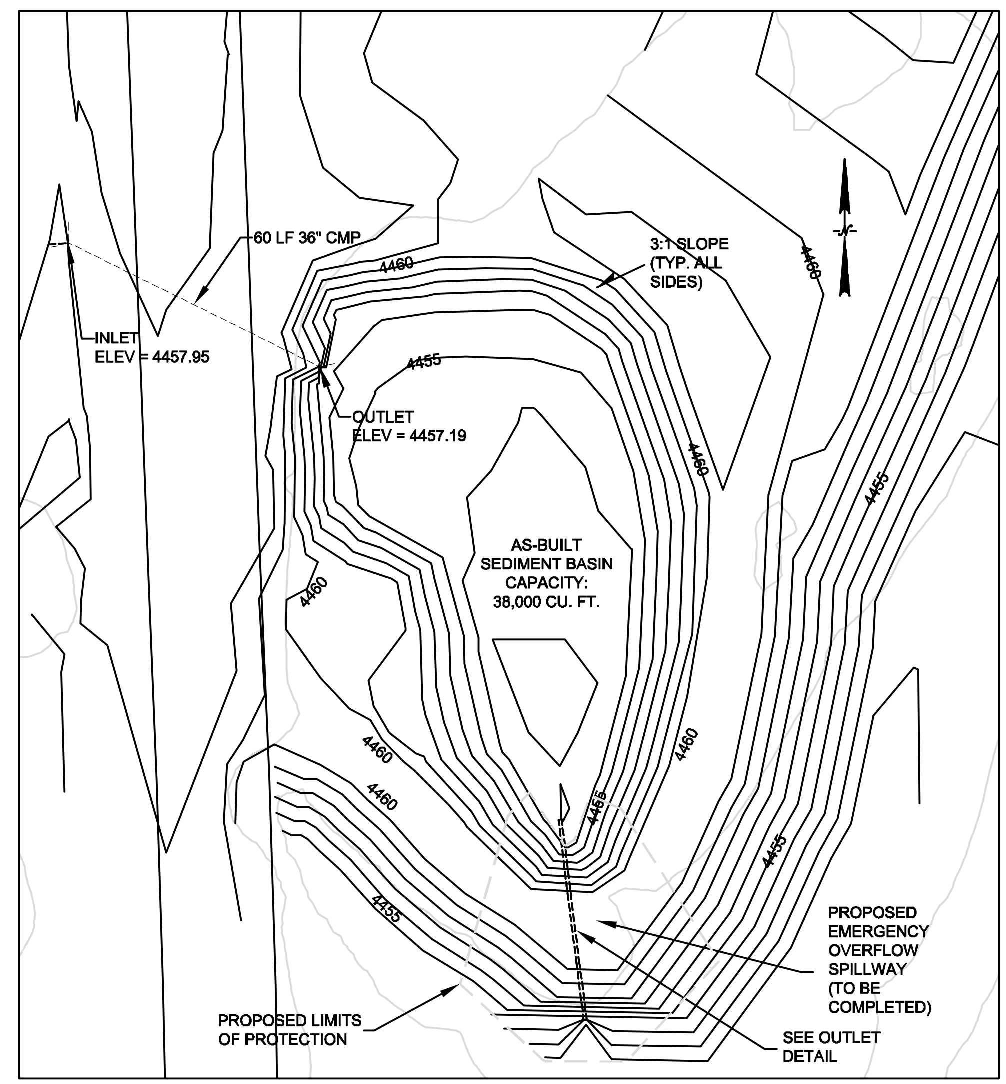
*NOTE: NO SURVEY DATA WAS PROVIDED FOR DROP STRUCTURE. STRUCTURE WAS ASSUMED TO BE BUILT ACCORDING TO PLAN. CALCULATIONS IN TABLE ARE NOT BASED ON AS-BUILT DATA.



TEMPORARY SEDIMENT BASIN OUTLET DETAIL

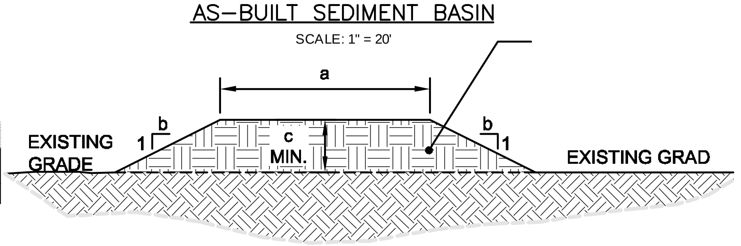
NTS

*NOTE: NO SURVEY DATA WAS PROVIDED FOR OUTLET ELEVATION. ELEVATION WAS INTERPOLATED FROM EXISTING CONTOURS AND SURVEYED POINTS IN THE AREA.



AS-BUILT SEDIMENT BASIN

SCALE: 1" = 20'



TYPICAL BERM CROSS SECTION

SCALE 1" = 2'-0"

CALL OUT	TOP WIDTH a	SLOPE b	HEIGHT c
BERM	1'	1	2'

20' 0 20' 40'

SCALE: 1" = 20'

AS-BUILT

These as-built plans are based on the information compiled and furnished by others. The compiled information represented on these drawings is not intended to represent in detail the exact location, type of component nor manner of constructions.

AS BUILT DRAWING

SYMBOL	DESCRIPTION	PREP.BY	DATE	APPROVED

REVISIONS

Tetra Tech Inc.

DESIGNED BY: CAW
DRAWN BY: DMF
CHECKED BY: MRR
RE-CHECKED BY: TLS
APPROVED BY: RG
DATE: 05/21/2008

SIZE D
IF SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT
SCALE REDUCED ACCORDINGLY

Prepared for: DENISON MINES

TONY M MINE
PHASE 1 SEDIMENT BASIN
AS-BUILT

Tony M Mine
Garfield County, Utah

EXHIBIT
G-5